

MAJOR ENERGY COMPANY ORACLE DATABASE MIGRATION

ORGANIZATION

Our client is a major entity in the power industry. XTIVIA assisted with mission-critical Oracle database infrastructure upgrades and migrations. The project goal was a required Data Center Modernization from AIX to Linux hardware. The landscape of the Oracle environment included multiple mission-critical systems, some requiring zero downtime. The interrelatedness of the systems presented a complex challenge for the Oracle migration team.

CHALLENGE

The client required a complex, cross-platform migration of very large Oracle databases. Specifically, they needed to migrate around 700 Oracle databases from AIX to Linux, including non-container to pluggable database conversions. There were significant internal hurdles, including the need for a team of highly-skilled Sr. Oracle DBAs to handle the complexity and size of the environment (one instance was over 100TB with thousands of tablespaces/datafiles), as well as stabilizing the production environment and managing a complex project schedule involving multiple application environments and business user groups. The high-stakes nature of their business demanded that database services were always available and highly performant, with some critical applications requiring zero-downtime solutions.

TECHNICAL SOLUTION

The team of XTIVIA Senior Oracle DBAs and the Oracle technical migration oversight leader turned the project around, delivering an immediate, successful impact, and the first milestone was reached 2.5 months ahead of schedule.

XTIVIA delivered cross-platform Oracle Database Migration services, specializing in the AIX to Linux migration using the XTTS method (Cross Platform Migrations - using RMAN with incremental backups method). The solution involved migrating to Oracle 19c Container/Pluggable databases, using XTTS migrations, GoldenGate for Zero downtime, and setting up Active DataGuard post-migration. In a separate but related effort (GoldenGate Microservices project), XTIVIA was contracted to assist with modernizing their data replication by converting numerous existing Bash/Korn shell scripts to Python scripts using Oracle GoldenGate 21c Microservices Architecture (MSA) REST APIs or CLI. XTIVIA came into the project after initial discovery and POC activities were underway, and were heading in the wrong direction with risks to the timeline, resources, and budget.

The highly technical team of senior XTIVIA Oracle DBA consultants quickly reassessed the project, contributed to the automation of the migration scripts, which was paramount to meeting tight timelines, and provided technical project management skills and resources to migrate the mass number of Oracle instances in a streamlined fashion. Troubleshooting was tackled quickly due to the highly skilled XTIVIA Oracle team, and lessons learned were quickly implemented into each remaining migration, which allowed the process to gain in speed and stability, resulting in beating the timeline by more than 2 months for this multiyear project, which was significant. The greatest non-monetary benefit the XTIVIA team provided to the end client was trust. XTIVIA rapidly demonstrated exceptional competence and reliability in delivering high-quality services.

BUSINESS RESULT

XTIVIA provided the specialized expertise required for a successful migration of large, critical databases. The team's competence was crucial to maintaining the client's reputation and ensuring stability in the new environment. The services ensured the complex migration steps were documented, automated, and performed correctly. The complexities of the project required multiple project management teams for resource planning and task management. XTIVIA contributed a senior-level Oracle DBA to provide the needed technical migration oversight needed to ensure the solution and timeline goals were met.

CUSTOMER QUOTE

"I am pleased to announce the successful completion of the final migration from the AIX environment to Linux, which took place this morning. This achievement allows us to begin the decommissioning of the AIX hardware. It marks the second major milestone in the Data Center AIX Migrations to Linux project.

Launched in August 2022 with the objective of transitioning over 50% off AIX by the end of 2023, the first milestone was reached 2.5 months ahead of schedule. Given the numerous dependencies and the collaboration required from the owners of approximately 750 Oracle database instances, this accomplishment is particularly significant.

I would like to extend my heartfelt appreciation to our core project team, the database owners, the developers and testers, the database team, and our partners. Their coordination and dedication were instrumental in the success of this project."

KEYWORDS

Database Management (Oracle Team). Specific Offerings: * Oracle Database Cross-Platform Migration (AIX to Linux)* Oracle 19c Database Upgrade/Containerization (non-container to pluggable)* DataGuard Implementation/Configuration (Active)* GoldenGate (classic) zero downtime migrations* GoldenGate Microservices Implementation and Script Conversion (BASH/Korn to Python)

SOFTWARE

Oracle Database: 19c EE, 19c RAC* Database Features/Tools: ASM, DataGuard Active* Migration Method: XTTS (using RMAN with incremental backups method)*, Golden Gate (for mission-critical databases) Replication/Modernization: Oracle GoldenGate (Classic and 21c Microservices), Python (for script conversion), REST API (for Microservices)

HARDWARE/PLATFORM

On-Premise Data Center Migration from AIX servers to Linux servers.

ABOUT XTIVIA

At XTIVIA, we've been providing IT solutions and consulting services for over 30 years with a wide range of services, including technology assessments, IT service and asset management, software development, data analytics, cloud migration, DevSecOps, ERP, and enterprise content management. Dedicated to each discipline, ensuring that our clients receive the best possible service. Through strategic acquisitions, we've acquired talented people who are experts in their industries, passionate about what they do, and committed to providing exceptional service to our clients. Whether you need to improve your IT infrastructure or implement new software solutions, XTIVIA is here to help you achieve your business goals. XTIVIA has offices in Colorado, New York, New Jersey, Texas, Virginia, and India. www.xtivia.com